

Limited Subsurface Investigation

**Sterling – Commerce Street
1432 – 1434 E. Commerce Street
&
323 Idaho Street
San Antonio, Texas 78205**

Prepared for:

Jasmine Engineering, Inc.
115 East Travis, Suite 1020
San Antonio, Texas 78205

Prepared by:

Drash Consultants, LLC
San Antonio, Texas
January 5, 2017
Drash Project No. 116E1164.00



January 5, 2017



Ms. Jasmine Azima
Jasmine Engineering, Inc.
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San Antonio, Texas 78205

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SUBJECT:

Limited Subsurface Investigation
Sterling – Commerce Street
1432 – 1434 East Commerce Street
& 323 Idaho Street
San Antonio, Texas 78205

Drash Project No.: 116E1164.00

Dear Ms. Azima:

Drash Consultants, LLC (Drash) is presenting the results from the Limited Subsurface Investigation (LSI) performed for the above referenced project. This report is intended for the sole use and benefit of Jasmine Engineering, Inc. and may not be relied upon by any other part without express permission of Drash Consultants, LLC.

BACKGROUND

Introduction

Drash conducted an investigation to assess potential impacts to subsurface media at the Sterling – Commerce Street property located at 1432 – 1434 East Commerce Street and 323 Idaho Street in San Antonio, Bexar County, Texas (Site). A Site Vicinity Map is provided in Appendix A. This report documents the results of the investigation conducted on December 16, 2016 in accordance with the agreement governing the nature and extent of the LSI. Conditions may exist which could not be identified as a result of this LSI.

Purpose

This LSI was intended to evaluate soil and perched groundwater (if present) conditions for possible impacts from chemicals of concern (COCs). Drash evaluated the Site in order to determine the related likelihood of a significant release of COCs due to current and/or historic activities at the Site and/or the Site vicinity as identified in a prior Phase I Environmental Site Assessment (ESA) dated February 7, 2013 issued by Pape-Dawson Engineers, Inc. (Pape-Dawson) as well as observations documented during a Forensic Building Study (FBS) dated March 10, 2014 issued by Raba Kistner Consultants, Inc. (Raba Kistner).

The following is a synopsis of the findings and observations indicated in the documents reviewed:

- The prior Phase I ESA identified the Midway Cleaners and Model Dyers and Cleaners facilities as Recognized Environmental Conditions (RECs) and possible sources of

Stoddard and chlorinated solvents which, due to the facilities location and distance relative to the Site, may have adversely impacted the soils and/or groundwater within the Site boundary. Additionally, the Phase I ESA identified the San Antonio Fire Station #3, Imperial Loan and Jewelry Company, Commerce Quick Stop, Manuel Paint & Body Shop, and West's Auto Repair Shop/HW Kreger Repair as RECs and possible petroleum hydrocarbon sources of potential impact to Site soils and groundwater (Pape-Dawson, 2013).

- During performance of the FBS four soil borings were installed in and adjacent to the 1432 E. Commerce Street structure to assess the soil properties. Two of the soil boring logs (B-2 and B-3) indicate possible hydrocarbon odors from approximately 5 ½ feet to 7 feet below the floor slab (Raba Kistner, 2014).

Based on review of the above referenced documents, Drash recommended a limited subsurface investigation to determine what impacts, if any, current and former Site activities and/or activities in the Site vicinity had on the soil and/or groundwater at the Site. The LSI is not intended to identify additional areas of concern, evaluate the potential for release of other COCs, to identify the full lateral and vertical extent of release, determine appropriate cleanup actions, or develop a detailed estimate of costs to correct concerns identified.

In addition, this LSI does not, nor is intended to meet the requirements of ASTM E1903-11, "Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process".

Health and Safety Plan

Drash developed a Health and Safety Plan that was specific to the property. The development of this plan is required by the Occupational Safety and Health Administration (OSHA) under Hazardous Waste Operations & Emergency Response 29 CFR 1910.120. The site Health and Safety Plan was designed to reduce the risk of physical or chemical exposures that may affect on-site workers in the proposed work area. The site Health and Safety Plan includes information about chemicals expected on the property, health and safety procedures for working on-site, and emergency response procedures. The Health and Safety Plan is on file at Drash's office.

Utility Locating

A utility inspection was performed at the Site at least 48 hours prior to the initiation of the subsurface investigation at the request of the subcontract driller, as required by Texas State law. This inspection consisted of the marking the underground utility locations by authorized utility locating personnel.

Permits

The City of San Antonio and Bexar County did not require drilling permits for borings or temporary monitoring wells.

SUBSURFACE INVESTIGATION

Soil Sampling

Soil samples from six on-site soil borings were collected continuously utilizing two-foot split barrel samplers or two to five-foot stainless steel macro core samplers equipped with dedicated disposable acetate sampling sleeves. A Site Boring Location Plan is provided in Appendix A. All soil samples were field screened using a photo-ionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene. The following table summarizes the soil boring depths and locations.

Soil Boring	Total Depth (Feet)	Location
B-1	8.0	Interior soil boring located within the northwest central portion of the 1434 E. Commerce Street structure.
B-2	10.0	Interior soil boring located within the far north-eastern portion of the 1432 E. Commerce Street structure.
B-3	15.0	Exterior soil boring located east adjacent to the 1432 E. Commerce Street structure.
B-4	10.0	Exterior soil boring located north-northeast adjacent to the 323 Idaho Street former residential structure.
B-5	15.0	Exterior soil boring located south adjacent to the 1434 E. Commerce Street structure.
B-6	15.0	Exterior soil boring located on the southwest portion of the Site near Idaho Street.

Please note that soil borings B-1 and B-2 were terminated due to the limitations of the equipment utilized to obtain samples given the relatively confined operating spaces and the lithology encountered in the subsurface.

Soils encountered at the Site generally consisted of the following:

- Alternating silty clay and clay material with minor gravel and silt from the surface down approximately 5.5 feet to 8 feet.
- Mixed clast and chert gravelly clays and clayey gravels with some silt from approximately 5.5 to 8 feet below ground surface (bgs) to approximately 10 to 12.5 feet bgs.
- High plasticity (fat) and relatively firm clays below 10 to 12.5 feet bgs.

Soil samples were continuously collected from each boring. After collection, selected samples were placed in laboratory supplied containers appropriate for the media being sampled and the specified analyses based on field screening results, depth and lithology, and/or visual evidence of impact. Immediately after collection, the samples were labeled and stored on ice in a cooler. The samples were delivered to the analytical laboratory, Alamo Analytical Laboratories, Ltd. in San Antonio, Texas.

Groundwater Sampling

Although the lithology encountered at the Site did not suggest the presence of perched groundwater, a one-inch temporary well was installed in boring B-3 and remained in place during the LSI activities. No perched groundwater was detected in the temporary monitoring well or any of the soil borings installed at the Site. The temporary well was constructed of one-inch diameter, schedule 40 poly-vinyl chloride (PVC) well screen and riser pipe, and was abandoned in accordance with Texas regulations (TAC, Title 16, Chapter 76.104) upon completion of field activities.

LABORATORY ANALYTICAL RESULTS

Laboratory Analytical Methods

The soil samples were transported under chain of custody to Alamo Analytical Laboratories, Ltd., a laboratory certified by the Texas Commission on Environmental Quality (TCEQ) and accredited by the National Environmental Laboratory Accreditation Conference (NELAC). Select soil samples were analyzed for total petroleum hydrocarbons (TPH) via TCEQ method TX 1005, Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Methyl tertiary-butyl ether (MTBE) and volatile organic compounds (VOCs) via EPA method 8260B (collected via EPA method 5035A), and Resource Conservation and Recovery Act (RCRA) 8 Metals via EPA methods 6010B and 7471A.

Summary of Data

The TCEQ has developed the TRRP for regulating the cleanup and management of hazardous wastes and COCs which have been released into the environment at affected properties, from regulated facilities, as well as closures of certain waste management facility components (e.g., tanks, container storage areas, surface impoundments). TRRP establishes requirements to investigate releases and evaluate whether an affected property or facility closure poses an unacceptable risk to humans, air, groundwater, surface soils, subsurface soils and/or aquatic environments.

The TRRP rule establishes a tiered approach for the development of action levels referred to as Tier 1, 2, or 3 PCLs. The default values are the Tier 1 PCLs, which are normally the most stringent (lowest) action levels. Drash reviewed the soil data against the Tier 1 Residential Levels for ^{GW}Soil_{ing} and ^{Total}Soil_{Comb} PCLs. Regarding metals in soil, the PCL is the lower of the Tier 1 Residential Levels or the Texas-Specific Soil Background (TSB) concentrations, whichever is higher. In many cases, the PCL for metals in soil are some combination of the TRRP Tier 1 Residential Levels and the TSBs in the absence of site-specific background concentrations.

Based on Drash's review of the analytical results, only one specimen exceeded the TRRP Tier 1 Residential PCLs. Soil sample B-6 (12.5 – 15') returned a slightly elevated result for Lead of 15.8 milligrams per kilogram (mg/kg) which exceeds the Tier 1 Residential PCL (TSB) of 15.0 mg/kg.

However, the TSBs represent median background concentrations for the entire state of Texas, and it is Drash's opinion that the presence of Lead is from naturally occurring sources.

However, the hydrocarbons evidenced at this Site are **not** from naturally occurring sources. Hydrocarbon impacts were observed in soil borings B-2 (5 - 7') and B-3 (7.5 – 8.5'). While it is evident that the site has been impacted, the analytical results are below the TRRP Tier 1 Residential PCLs. This is most likely due to natural attenuation over time. It is more likely than not that the hydrocarbon impacts originated from off Site sources.

CONCLUSIONS

The following conclusions are based on the results of a LSI performed at the Sterling – Commerce Street property located at 1432 – 1434 E. Commerce Street and 323 Idaho Street in San Antonio, Bexar County, Texas. This investigation was intended to assess RECs identified in a Phase I ESA report completed by Pape-Dawson dated February 7, 2013 and observations made during a FBS conducted by Raba-Kistner in March 2014. The LSI was not intended to satisfy the level of inquiry that may be necessary to support remedial solutions or migration pathways related to a release from the RECs. For this reason, additional sampling may be required to provide sufficient data to support remedial solutions and provide closure of environmental pathways, if requested.

- According to Drash's review of the laboratory analytical results, only one specimen exceeded the TRRP Tier 1 Residential PCLs; soil sample B-6 (12.5 – 15'). This sample returned a slightly elevated result for Lead and **it is Drash's opinion that this result is naturally occurring.**
- The analytical results indicate that the constituents of concern are below the TRRP Tier 1 Residential PCLs, which preclude any regulatory considerations. However, it is apparent that the Site has been impacted by hydrocarbons based on visual and olfactory evidence. Even though the hydrocarbon levels are low, which is most likely the result of attenuation over time, the hydrocarbon odors are significant.

It is more likely than not that these impacted soils will be encountered during earthwork construction at the Site for foundations and buried utilities. Normal disposition of these soils is not advised due to the hydrocarbon odors and the potential for encountering more impacted zones during construction. **It is Drash's opinion that the impacted soils be removed from the site.**

- These impacted soils can only be disposed at an approved landfill. This soil, before disposal, will have to be properly characterized (sampled). Based on characterization results various options may be available for disposal.

On the basis of Drash's review of the analytical data and the limitations governing this investigation, **Drash recommends no further environmental investigation or study is needed at this time.**

Please note that no environmental assessment can absolutely preclude the presence of hazardous materials on a Site. Future changes in environmental conditions and Site

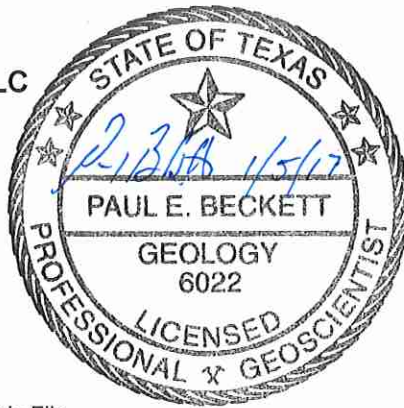
characteristics/usage may occur with the passage of time, in which case the conclusions in this report may require re-evaluation.

This report will assist the client and the client's legal counsel in evaluating and allocating the environmental risks that are always present with any real estate transaction or development. However, it is the responsibility of the client and the client's legal counsel to determine, based on the client's experience, whether additional information is required in order to meet the investigative burdens placed on real estate owners by state and federal agencies.

Thank you for selecting Drash to provide the environmental services for this phase of the project. We appreciate the opportunity to work with you, and we look forward to working with you on future projects. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Respectfully Submitted,
Drash Consultants, LLC

Paul E. Beckett, P.G.
Senior Project Geologist



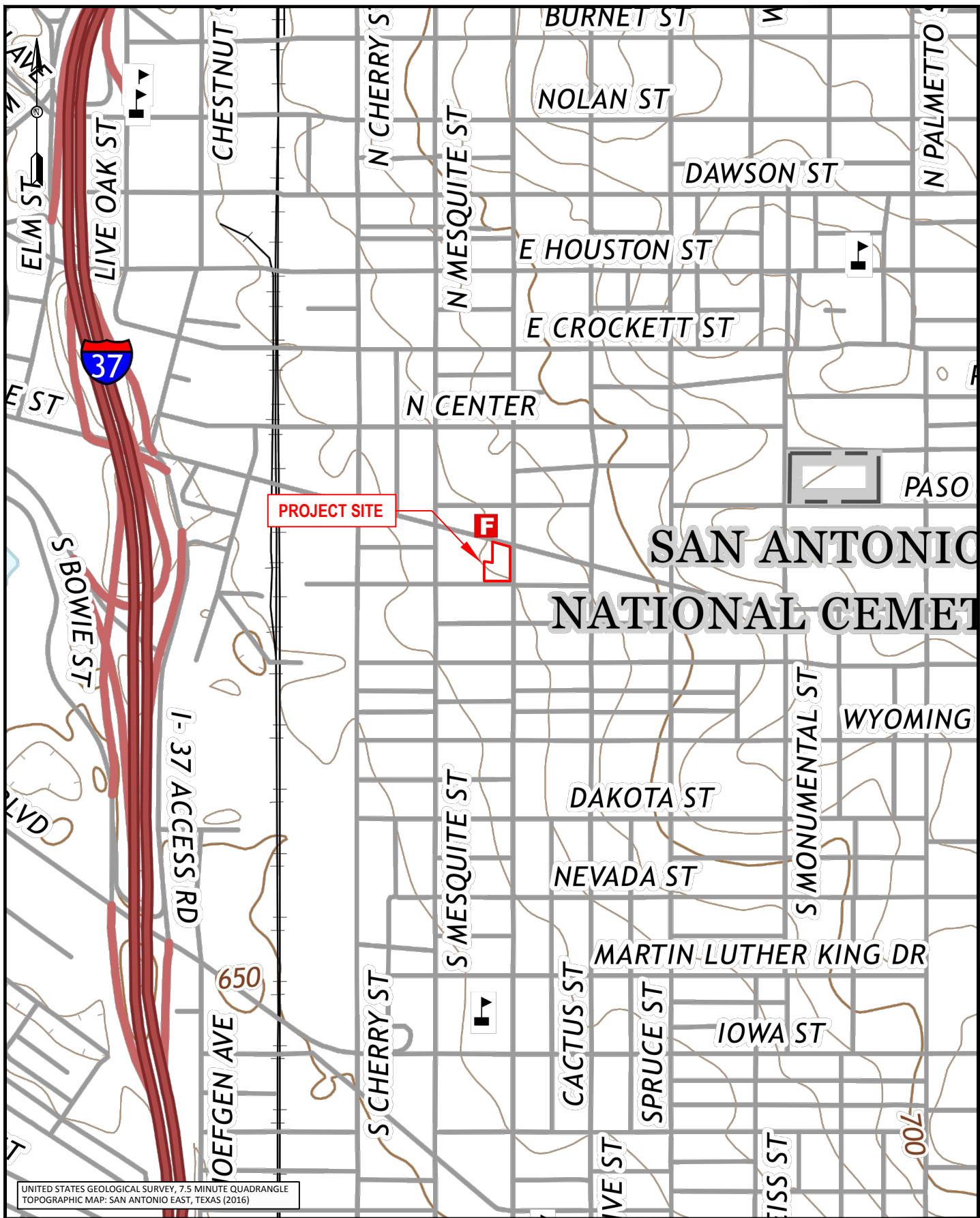
Tomas Hernandez, Jr., P.G.
Environmental Services Group
Department Manager

PEB/TH/set – 116E1164.00

cc: Addressee: (1) Electronic File

- Appendix A – General Site Information
- Appendix B – Boring Logs
- Appendix C – Laboratory Analytical Report

APPENDIX A
GENERAL SITE INFORMATION
Site Vicinity Map
Site Boring Location Plan



UNITED STATES GEOLOGICAL SURVEY, 7.5 MINUTE QUADRANGLE
TOPOGRAPHIC MAP: SAN ANTONIO EAST, TEXAS (2016)



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Project Mngr:	PB
Drawn By:	JM
Checked By:	PB
Reviewed By:	TH



Project No.	116E1164.00
Scale:	NOT TO SCALE
Date:	01-04-2017

SITE VICINITY MAP

STERLING - COMMERCE STREET
1432-1434 EAST COMMERCE STREET
SAN ANTONIO, BEXAR COUNTY, TEXAS 78205

EXHIBIT
A-1



- - - - SITE BOUNDARY
 SOIL BORING
 SOIL BORING AND TEMPORARY MONITORING WELL



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Scale:	NOT TO SCALE
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SITE BORING LOCATION PLAN

STERLING - COMMERCE STREET
1432-1434 EAST COMMERCE STREET
SAN ANTONIO, BEXAR COUNTY, TEXAS 78205

EXHIBIT

A-2

APPENDIX B
BORING LOGS








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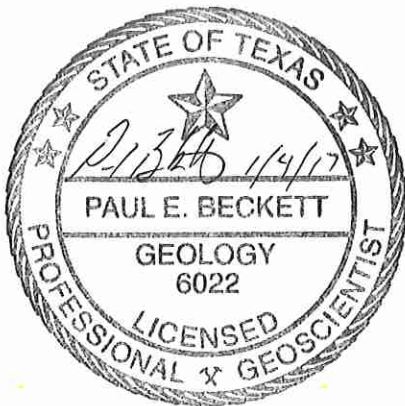
BORING NUMBER B-1

PAGE 1 OF 1

CLIENT Jasmine Engineering PROJECT NAME Sterling - Commerce LSI
 PROJECT NUMBER 116E1164 PROJECT LOCATION 1432-1434 E. Commerce Street, San Antonio, TX
 DATE STARTED 12/16/17 COMPLETED 12/16/17 GROUND ELEVATION _____ HOLE SIZE 3 inches
 DRILLING CONTRACTOR Vortex GROUND WATER LEVELS:
 DRILLING METHOD Geoprobe AT TIME OF DRILLING ---
 LOGGED BY JM CHECKED BY PEB AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	DRILLING METHOD	RECOVERY (%)	SAMPLE ID	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							
0.5	P	83		PID = 16.4		(CL-ML) 10YR 3/1 very dark gray silty clay; soft, dry.	
2.5	P	75		PID = 14		(CH) 10YR 3/1 very dark gray high plasticity clay; medium stiff and dry grading to soft and moist with trace silt.	
5.0	P	100		PID = 10.7		- Transitions to 10YR 5/2 grayish-brown; soft and moist.	
5.5							
7.5	P	100	B-1 (6-8')	PID = 14		(GC) 10YR 5/2 grayish-brown clayey gravel with abundant chert; moist, increasing clay with depth. Larger gravels, less clay and very moist at 8 feet.	
8.0							

Bottom of borehole at 8.0 feet.



These logs should not be used separately from the original report.








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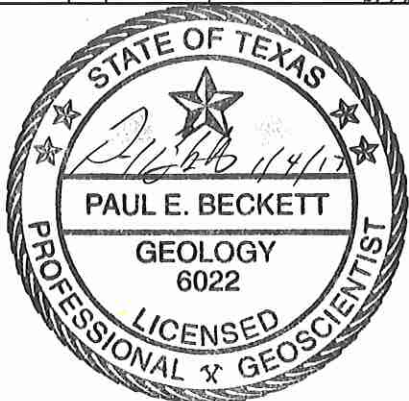
BORING NUMBER B-2

PAGE 1 OF 1

CLIENT <u>Jasmine Engineering</u>	PROJECT NAME <u>Sterling - Commerce LSI</u>
PROJECT NUMBER <u>116E1164</u>	PROJECT LOCATION <u>1432-1434 E. Commerce Street, San Antonio, TX</u>
DATE STARTED <u>12/16/17</u> COMPLETED <u>12/16/17</u>	GROUND ELEVATION _____ HOLE SIZE <u>3 inches</u>
DRILLING CONTRACTOR <u>Vortex</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>JM</u> CHECKED BY <u>PEB</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

DEPTH (ft)	DRILLING METHOD	RECOVERY (%)	SAMPLE ID	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0							
0.3	P	PROBE	17	PID = 11.5		Concrete slab (CH) 10YR 3/1 very dark gray high plasticity clay; soft and slightly moist with trace gravel	
2.5	P	PROBE	17	PID = 45			
5.0	P	PROBE	100 B-2 (4-6')	PID = 287.9		- Transitions to 10YR 5/1 gray; soft and slightly moist, slight hydrocarbon odor, trace calcareous nodules.	
7.5	P	PROBE	300	PID = 163.6		- Transitions to 2.5Y 5/3 light olive brown; trace calcareous deposits and small gravels, stronger hydrocarbon odor from 7 to 8'.	
10.0	P	PROBE	100 B-2 (8-10')	PID = 451.7		(GC) 2.5Y 5/3 light olive brown cherty gravel and clayey gravel; moist, strong hydrocarbon odor. Bottom of borehole at 10.0 feet.	

These logs should not be used separately from the original report





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BORING NUMBER B-3

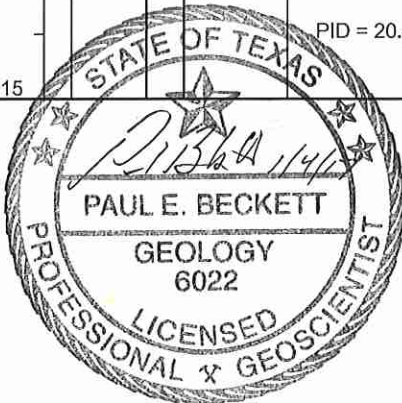
PAGE 1 OF 1

CLIENT Jasmine Engineering PROJECT NAME Sterling - Commerce LSI
 PROJECT NUMBER 116E1164 PROJECT LOCATION 1432-1434 E. Commerce Street, San Antonio, TX
 DATE STARTED 12/16/17 COMPLETED 12/16/17 GROUND ELEVATION _____ HOLE SIZE 3 inches
 DRILLING CONTRACTOR Vortex GROUND WATER LEVELS:
 DRILLING METHOD Geoprobe AT TIME OF DRILLING ---
 LOGGED BY JM CHECKED BY PEB AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	DRILLING METHOD	RECOVERY (%)	SAMPLE ID	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							Casing Type: 1" Sch 40 PVC
0 - 5	P PROBE	60	B-3 (2.5-5')	PID = 14.3 PID = 397	[Diagonal Hatching]	(CH) 10YR 3/1 very dark gray high plasticity clay; soft and slightly moist, trace calcareous nodules and root hairs.	Concrete seal 1" Sch 40 PVC Riser
5 - 8.5	P PROBE	100	B-3 (7.5-10')	PID = 198.2	[Diagonal Hatching]	- Transitions to 2.5Y 5/3 light olive brown; trace silt.	Bentonite seal
8.5 - 10				PID = 590.1	[Stippled]	- Black/weathered hydrocarbon impacted soil layer from 7.5 to 8'.	12/20 Sand Filter Pack
10 - 12.5	P PROBE	100		PID = 504.9	[Stippled]	(GC) 2.5Y 5/3 light olive brown clayey gravel (chert); dry, strong hydrocarbon odor.	
12.5 - 15.0	P PROBE	100		PID = 20.4	[Diagonal Hatching]	(CH) 2.5Y 6/4 light yellowish-brown; medium stiff and slightly moist, calcareous deposits and trace silt pockets.	1" Sch 40 PVC 0.010 Slotted Screen

Bottom of borehole at 15.0 feet.

These logs should not be used separately from the original report





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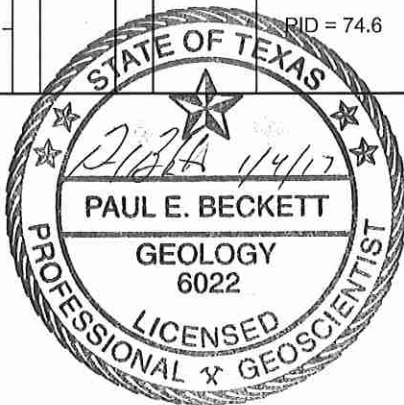
BORING NUMBER B-4

PAGE 1 OF 1

CLIENT <u>Jasmine Engineering</u>	PROJECT NAME <u>Sterling - Commerce LSI</u>
PROJECT NUMBER <u>116E1164</u>	PROJECT LOCATION <u>1432-1434 E. Commerce Street, San Antonio, TX</u>
DATE STARTED <u>12/16/17</u> COMPLETED <u>12/16/17</u>	GROUND ELEVATION _____ HOLE SIZE <u>3 inches</u>
DRILLING CONTRACTOR <u>Vortex</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>JM</u> CHECKED BY <u>PEB</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

DEPTH (ft)	DRILLING METHOD	RECOVERY (%)	SAMPLE ID	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							
	P		40	PID = 55.6	0.2	Asphalt	
				PID = 31.3	1.0	Light tan and brown limestone base and clayey sand fill material. (CH) 10YR 3/1 very dark gray high plasticity clay; soft and slightly moist.	
5	P		100 B-4 (5-7.5')	PID = 58.6		- Transitions to 10YR 6/4 light yellowish-brown; soft and slightly moist	
				PID = 38.7	8.5	(GC) 2.5Y 5/3 light olive brown clayey gravel (chert); moist with some ferrous staining.	
10	P		100 B-4 (12.5-15')	PID = 18.1	10.0	(CH) 5Y 6/2 light olive gray and 2.5Y 6/4 light yellowish-brown high plasticity clay; trace silt, medium stiff and slightly moist.	
15				PID = 74.6	15.0		

Bottom of borehole at 15.0 feet.







These logs should not be used separately from the original report.



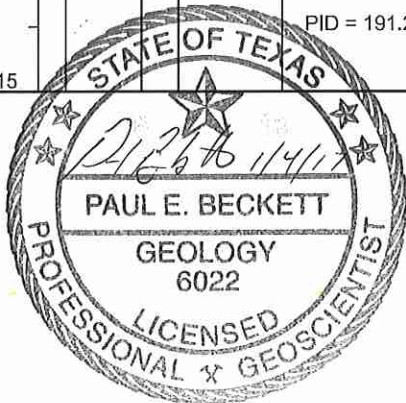
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BORING NUMBER B-5

CLIENT <u>Jasmine Engineering</u>	PROJECT NAME <u>Sterling - Commerce LSI</u>
PROJECT NUMBER <u>116E1164</u>	PROJECT LOCATION <u>1432-1434 E. Commerce Street, San Antonio, TX</u>
DATE STARTED <u>12/16/17</u> COMPLETED <u>12/16/17</u>	GROUND ELEVATION _____ HOLE SIZE <u>3 inches</u>
DRILLING CONTRACTOR <u>Vortex</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Geoprobe</u>	AT TIME OF DRILLING <u>---</u>
LOGGED BY <u>JM</u> CHECKED BY <u>PEB</u>	AT END OF DRILLING <u>---</u>
NOTES _____	AFTER DRILLING <u>---</u>

DEPTH (ft)	DRILLING METHOD	RECOVERY (%)	SAMPLE ID	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							
5	P PROBE	5				Light tan and brown limestone gravel, clay and sand fill material	
10	P PROBE	100	B-5 (7.5-10')	PID = 15 PID = 24.5		(CH) 10YR 4/1 dark gray high plasticity clay; soft and slightly moist. - Transitions to 2.5Y 6/4 light yellowish-brown; trace calcite deposits, grading soft to medium stiff, slightly moist.	
15	P PROBE	100	B-5 (12.5-15')	PID = 24.9 PID = 191.2		- increasing calcite deposits with depth.	
15.0						(CH) 5Y 6/2 light olive gray and 2.5Y 6/4 light yellowish-brown high plasticity clay; medium stiff, slightly moist.	

Bottom of borehole at 15.0 feet.



These logs should not be used separately from the original report



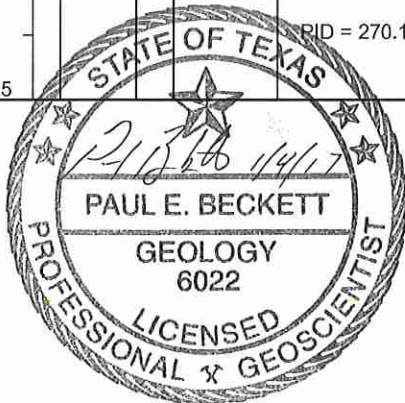
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BORING NUMBER B-6

CLIENT Jasmine Engineering PROJECT NAME Sterling - Commerce LSI
 PROJECT NUMBER 116E1164 PROJECT LOCATION 1432-1434 E. Commerce Street, San Antonio, TX
 DATE STARTED 12/16/17 COMPLETED 12/16/17 GROUND ELEVATION _____ HOLE SIZE 3 inches
 DRILLING CONTRACTOR Vortex GROUND WATER LEVELS:
 DRILLING METHOD Geoprobe AT TIME OF DRILLING ---
 LOGGED BY JM CHECKED BY PEB AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	DRILLING METHOD	RECOVERY (%)	SAMPLE ID	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							
5	P	PROBE	53	PID = 34.8		(CH) 10YR 3/1 very dark gray high plasticity clay; soft and slightly moist; root hairs throughout, trace gravels.	
				PID = 36.3			
	P	PROBE	100	PID = 116		- Transitions to 2.5Y 6/4 light yellowish-brown; grades soft to medium stiff, slightly moist, calcite deposits throughout and trace cherty gravels from 9 to 10'.	
10				PID = 136.8			
	P	PROBE	100	PID = 185.2		- Transitions to 5Y 6/2 light olive gray and 2.5Y 6/4 light yellowish-brown; medium stiff and slightly moist, trace calcite.	
15				PID = 270.1			

Bottom of borehole at 15.0 feet.



These logs should not be used separately from the original report.

APPENDIX C
LABORATORY ANALYTICAL REPORT



Analytical Results Report

CLIENT: Drash Consultants, LLC
Lab Order 1612077
Project: 116G1164 Sterling - Commerce LSI

Collection Date: 12/16/2016 10:36:00 AM
Matrix: SOIL
Lab ID: 1612077-01

Client Sample ID: B - 1 (6 - 8')

Table with columns: Analyses, Test Code, Result, Limit, Units, DF, Date Analyzed. Rows include MERCURY, TOTAL; PERCENT MOISTURE; METALS-RCRA, Total; and TOTAL PETROLEUM HYDROCAR.

Surrogate Recoveries

Table with columns: Test Code, Analyte, Recovery, Control Limits. Rows include TPH1005_S for 1-Chlorooctadecane and 1-Chlorooctane.

For Surrogates: 0 = Dil. Out

J - Analyte detected below quantitation limits

Approved by: [Signature]

Report of Laboratory Analysis

Note: The analysis contained in this report applies only to the samples tested and for the exclusive use of the addressed client. Reproduction of this report wholly or in part requires written permission of the client.



Analytical Results Report

CLIENT: Drash Consultants, LLC
Lab Order 1612077
Project: 116G1164 Sterling - Commerce LSI

Collection Date: 12/16/2016 11:48:00 AM
Matrix: SOIL
Lab ID: 1612077-03

Client Sample ID: B - 2 (8 - 10')

Table with columns: Analyses, Test Code, Result, Limit, Units, DF, Date Analyzed. Rows include MERCURY, TOTAL; PERCENT MOISTURE; METALS-RCRA, Total; and TOTAL PETROLEUM HYDROCAR.

Surrogate Recoveries

Table with columns: Test Code, Analyte, Recovery, Control Limits. Rows include TPH1005_S for 1-Chlorooctadecane and 1-Chlorooctane.

For Surrogates: 0 = Dil. Out

Approved by: [Signature]

Report of Laboratory Analysis

J - Analyte detected below quantitation limits

Note: The analysis contained in this report applies only to the samples tested and for the exclusive use of the addressed client. Reproduction of this report wholly or in part requires written permission of the client.



Analytical Results Report

CLIENT: Drash Consultants, LLC
Lab Order 1612077
Project: 116G1164 Sterling - Commerce LSI

Collection Date: 12/16/2016 2:36:00 PM
Matrix: SOIL
Lab ID: 1612077-05

Client Sample ID: B - 3 (7.5 - 10')

Table with columns: Analyses, Test Code, Result, Limit, Units, DF, Date Analyzed. Includes sections for MERCURY, TOTAL; PERCENT MOISTURE; METALS-RCRA, Total; and TOTAL PETROLEUM HYDROCAR.

Surrogate Recoveries

Table with columns: Test Code, Analyte, Recovery, Control Limits. Lists 1-Chlorooctadecane and 1-Chlorooctane.

For Surrogates: 0 = Dil. Out

J - Analyte detected below quantitation limits

Approved by: [Signature]

Report of Laboratory Analysis

Note: The analysis contained in this report applies only to the samples tested and for the exclusive use of the addressed client. Reproduction of this report wholly or in part requires written permission of the client.



Analytical Results Report

CLIENT: Drash Consultants, LLC
Lab Order 1612077
Project: 116G1164 Sterling - Commerce LSI

Collection Date: 12/16/2016 3:06:00 PM
Matrix: SOIL
Lab ID: 1612077-07

Client Sample ID: B - 4 (12.5 - 15')

Table with columns: Analyses, Test Code, Result, Limit, Units, DF, Date Analyzed. Rows include MERCURY, TOTAL; PERCENT MOISTURE; METALS-RCRA, Total; and TOTAL PETROLEUM HYDROCAR.

Surrogate Recoveries

Table with columns: Test Code, Analyte, Recovery, Control Limits. Rows include TPH1005_S for 1-Chlorooctadecane and 1-Chlorooctane.

For Surrogates: 0 = Dil. Out

J - Analyte detected below quantitation limits

Approved by: [Signature]

Report of Laboratory Analysis

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Analytical Results Report

CLIENT: Drash Consultants, LLC
Lab Order 1612077
Project: 116G1164 Sterling - Commerce LSI

Collection Date: 12/16/2016 3:23:00 PM
Matrix: SOIL
Lab ID: 1612077-08

Client Sample ID: B - 5 (5 - 7.5')

Table with columns: Analyses, Test Code, Result, Limit, Units, DF, Date Analyzed. Rows include MERCURY, TOTAL; PERCENT MOISTURE; METALS-RCRA, Total; and TOTAL PETROLEUM HYDROCAR.

Surrogate Recoveries

Table with columns: Test Code, Analyte, Recovery, Control Limits. Rows include TPH1005_S for 1-Chlorooctadecane and 1-Chlorooctane.

For Surrogates: 0 = Dil. Out

J - Analyte detected below quantitation limits

Approved by: [Signature]

Report of Laboratory Analysis

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Analytical Results Report

CLIENT: Drash Consultants, LLC
Lab Order 1612077
Project: 116G1164 Sterling - Commerce LSI

Collection Date: 12/16/2016 4:03:00 PM
Matrix: SOIL
Lab ID: 1612077-10

Client Sample ID: B - 6 (12.5 - 15')

Table with columns: Analyses, Test Code, Result, Limit, Units, DF, Date Analyzed. Rows include MERCURY, TOTAL; PERCENT MOISTURE; METALS-RCRA, Total; and TOTAL PETROLEUM HYDROCAR.

Surrogate Recoveries

Table with columns: Test Code, Analyte, Recovery, Control Limits. Rows include TPH1005_S for 1-Chlorooctadecane and 1-Chlorooctane.

For Surrogates: 0 = Dil. Out

J - Analyte detected below quantitation limits

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-02A
Analyst: SS

Client Sample ID B - 2 (4 - 6')

BTEX

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, Total, and Methyl tert-butyl ether.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4 and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-04A
Analyst: SS

Client Sample ID B - 3 (2.5 - 5')

BTEX

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, Total, and Methyl tert-butyl ether.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4 and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-06A
Analyst: SS

Client Sample ID B - 4 (5 - 7.5')

BTEX

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, Total, and Methyl tert-butyl ether.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4 and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-09A
Analyst: SS

Client Sample ID B - 5 (12.5 - 15')

BTEX

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, Total, and Methyl tert-butyl ether.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4 and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-01A
Analyst: SS

Client Sample ID B - 1 (6 - 8')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-01A
Analyst: SS

Client Sample ID B - 1 (6 - 8')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various organic compounds and their detection results.

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-01A
Analyst: SS

Client Sample ID B - 1 (6 - 8')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-03A
Analyst: SS

Client Sample ID B - 2 (8 - 10')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-03A
Analyst: SS

Client Sample ID B - 2 (8 - 10')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various organic compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-03A
Analyst: SS

Client Sample ID B - 2 (8 - 10')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-05A
Analyst: SS

Client Sample ID B - 3 (7.5 - 10')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-05A
Analyst: SS

Client Sample ID B - 3 (7.5 - 10')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various organic compounds like Bromobenzene, Chlorobenzene, etc., with their respective results and limits.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-05A
Analyst: SS

Client Sample ID B - 3 (7.5 - 10')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-07A
Analyst: SS

Client Sample ID B - 4 (12.5 - 15')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-07A
Analyst: SS

Client Sample ID B - 4 (12.5 - 15')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various organic compounds like Bromobenzene, Chlorobenzene, etc., with their respective results and limits.

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-07A
Analyst: SS

Client Sample ID B - 4 (12.5 - 15')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-08A
Analyst: SS

Client Sample ID B - 5 (5 - 7.5')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by:

Handwritten signature

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-08A
Analyst: SS

Client Sample ID B - 5 (5 - 7.5')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various organic compounds like Bromobenzene, Chlorobenzene, etc., with their respective results and limits.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-08A
Analyst: SS

Client Sample ID B - 5 (5 - 7.5')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

[Handwritten signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-10A
Analyst: SS

Client Sample ID B - 6 (12.5 - 15')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-10A
Analyst: SS

Client Sample ID B - 6 (12.5 - 15')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Lists various chemical compounds and their detection results.

Approved by: [Signature]

Report of Laboratory Analysis

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Client: Drash Consultants, LLC
Work Order: 1612077
Project Name: 116G1164 Sterling - Commerce LSI

Date: 22-Dec-16
Date Received: 17-Dec-16
Collection Date: 16-Dec-16
Preparation Date: 21-Dec-16
Matrix: SOIL
Lab ID: 1612077-10A
Analyst: SS

Client Sample ID B - 6 (12.5 - 15')

Volatile Organics by GC/MS

SW8260B

Table with 6 columns: Analyte, Result, Reporting Limit, DF, Units, Date Analyzed. Rows include tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride.

Surrogate Recoveries

Table with 3 columns: Analyte, Recovery, Control Limits. Rows include 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, and Toluene-d8.

For Surrogates: 0 = Dil. Out

Approved by:

Handwritten signature

Report of Laboratory Analysis

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CLIENT: Drash Consultants, LLC

Work Order: 1612077

Project: 116G1164 Sterling - Commerce LSI

QC SUMMARY REPORT

Analyte	%REC						%REC			RPD	Low - High	RPD				
	BLK	SPK value	LCS	LCSD	RPD %	RPD Limit	MS	MSD	%	Limit	Limit	Parent	DUP	%	Limit	
Batch ID: BTXS_GCMS-12/21/2016	TestName: BTEX															
Run ID: BTEX1_161221A	Test Code: SW8260B		Units: mg/Kg			Analysis Date: 12/21/2016			Prep Date: 12/21/2016							
Benzene	<0.005	0.05	102.7%	95.1%	8.000	30.0					57 - 142					
Toluene	<0.005	0.05	103.0%	109.7%	6.000	30.0					53 - 145					
Ethylbenzene	<0.005	0.05	108.7%	100.2%	8.000	30.0					66 - 142					
Xylenes, Total	<0.015	0.15	104.1%	96.8%	7.000	30.0					55 - 140					
Methyl tert-butyl ether	<0.005	0.05	102.5%	100.2%	2.000	30.0					54 - 170					
Batch ID: HG_R_S-12/22/2016	TestName: MERCURY, TOTAL															
Run ID: HG_161221A	Test Code: SW7471A		Units: mg/Kg			Analysis Date: 12/21/2016			Prep Date: 12/21/2016 8:30:00							
Mercury	<0.04	0.5	98.0%	96.0%	2.000	25.0	96.0%	94.0%	2.000	25.0	77 - 120					
Batch ID: PMOIST-12/19/2016	TestName: PERCENT MOISTURE															
Run ID: BAL1_161219A	Test Code: D2216		Units: wt%			Analysis Date: 12/20/2016 11:00:00 AM			Prep Date: 12/19/2016 5:45:00							
Percent Moisture												15.9	15.7	1.000	15.0	
Batch ID: RCRA7_S-12/22/2016	TestName: METALS-RCRA, Total															
Run ID: ICP_161222D	Test Code: SW6010B		Units: mg/Kg			Analysis Date: 12/22/2016 1:00:00 PM			Prep Date: 12/21/2016 9:00:00							
Arsenic	<2.5	50	100.0%	99.8%	0.000	30.0	75.6%	73.2%	3.000	30.0	80 - 120					
Barium	<1	50	98.2%	96.8%	1.000	30.0	77.6%	84.6%	3.000	30.0	80 - 120					
Cadmium	<0.5	50	103.0%	103.8%	1.000	30.0	81.0%	83.0%	2.000	30.0	80 - 120					
Chromium	<0.5	50	98.4%	100.4%	2.000	30.0	76.6%	79.4%	2.000	30.0	80 - 120					
Lead	<1.5	50	101.4%	100.0%	1.000	30.0	77.6%	80.2%	2.000	30.0	80 - 120					
Selenium	<2	50	103.8%	100.6%	3.000	30.0	84.8%	86.8%	2.000	30.0	80 - 120					
Silver	<0.78	50	96.0%	96.4%	0.000	30.0	78.8%	79.2%	1.000	30.0	80 - 120					

Approved by: *[Signature]*

Laboratory QC Report

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CLIENT: Drash Consultants, LLC

Work Order: 1612077

Project: 116G1164 Sterling - Commerce LSI

QC SUMMARY REPORT

Analyte	%REC				%REC			RPD		Low - High		RPD			
	BLK	SPK value	LCS	LCSD	RPD %	RPD Limit	MS	MSD	%	Limit	Limit	Parent	DUP	%	Limit
Batch ID: TPH1005_S-12/21/2016	TestName: TOTAL PETROLEUM HYDROCARBONS														
Run ID: TPH_161219B	Test Code: TX1005			Units: mg/Kg			Analysis Date: 12/19/2016			Prep Date: 12/19/2016					
Hydrocarbons, C6-C12	<50	500	99.2%	81.2%	20.000	30.0	86.2%	80.2%	7.000	30.0	75 - 125				
Hydrocarbons, >C12-C28	<50	500	104.8%	116.6%	11.000	30.0	96.4%	118.6%	21.000	30.0	75 - 125				
Hydrocarbons, >C28-C35	<50														
Hydrocarbons, C6-C35	<50	1000	102.0%	98.9%	3.000	30.0	90.3%	99.4%	10.000	30.0	75 - 125				

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QC SUMMARY REPORT

Analyte	%REC				%REC			RPD	Low - High		RPD				
	BLK	SPK value	LCS	LCSD	RPD %	RPD Limit	MS	MSD	%	Limit	Limit	Parent	DUP	%	Limit
Batch ID: VOC1_161221A	TestName: Volatile Organics by GC/MS														
Run ID: VOC1_161221A	Test Code: SW8260B		Units: ug/Kg			Analysis Date: 12/21/2016 3:46:00 PM			Prep Date: 12/21/2016 3:46:00						
1,1,1,2-Tetrachloroethane	<5														
1,1,1-Trichloroethane	<5	50	99.6%								42 - 177				
1,1,2,2-Tetrachloroethane	<5														
1,1,2-Trichloroethane	<5														
1,1-Dichloroethane	<5														
1,1-Dichloroethene	<5	50	93.7%								59 - 143				
1,1-Dichloropropene	<5														
1,2,3-Trichlorobenzene	<5														
1,2,3-Trichloropropane	<5														
1,2,4-Trichlorobenzene	<5														
1,2,4-Trimethylbenzene	<5														
1,2-Dibromo-3-chloropropane	<5														
1,2-Dibromoethane	<5														
1,2-Dichlorobenzene	<5														
1,2-Dichloroethane	<5														
1,2-Dichloropropane	<5														
1,3,5-Trimethylbenzene	<5														
1,3-Dichlorobenzene	<5														
1,3-Dichloropropane	<5														
1,4-Dichlorobenzene	<5														
2,2-Dichloropropane	<5														
2-Butanone	<10														
2-Chlorotoluene	<5														
2-Hexanone	<10														
4-Chlorotoluene	<5														
4-Isopropyltoluene	<5														
4-Methyl-2-pentanone	<10														
Acetone	<10														
Benzene	<5	50	95.1%								57 - 142				

Approved by: *[Signature]*

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Work Order: 1612077

Project: 116G1164 Sterling - Commerce LSI

QC SUMMARY REPORT

Analyte	BLK	%REC				%REC		RPD		Low - High		RPD			
		SPK value	LCS	LCSD	RPD %	RPD Limit	MS	MSD	%	Limit	Limit	Parent	DUP	%	Limit
Bromobenzene	<5														
Bromochloromethane	<5														
Bromodichloromethane	<5														
Bromoform	<5														
Bromomethane	<5														
Carbon disulfide	<5														
Carbon tetrachloride	<5														
Chlorobenzene	<5	50	93.6%									61 - 134			
Chloroethane	<5														
Chloroform	<5														
Chloromethane	<5														
cis-1,2-Dichloroethene	<5														
cis-1,3-Dichloropropene	<5														
Dibromochloromethane	<5														
Dibromomethane	<5														
Dichlorodifluoromethane	<5														
Ethylbenzene	<5														
Hexachlorobutadiene	<5														
Iodomethane	<5														
Isopropylbenzene	<5														
m,p-Xylenes	<10														
Methyl tert-butyl ether	<5	50	91.1%									54 - 170			
Methylene chloride	<5														
n-Butylbenzene	<5														
n-Propylbenzene	<5														
Naphthalene	<15														
o-Xylene	<5														
sec-Butylbenzene	<5														
Styrene	<5														
tert-Butylbenzene	<5														
Tetrachloroethene	<5														
Toluene	<5	50	109.7%									53 - 145			
trans-1,2-Dichloroethene	<5														

Approved by: *[Signature]*

Laboratory QC Report

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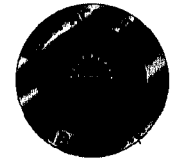
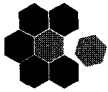
QC SUMMARY REPORT

Analyte	BLK	SPK value	%REC				%REC			RPD	Low - High		RPD		
			LCS	LCSD	RPD %	RPD Limit	MS	MSD	%	Limit	Limit	Parent	DUP	%	Limit
trans-1,3-Dichloropropene	<10														
Trichloroethene	<5	50	96.2%									61 - 133			
Trichlorofluoromethane	<5														
Vinyl chloride	<2														

Approved by: *[Signature]*

Laboratory QC Report

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MUST BE COMPLETED BY CLIENT

Alamo's Client: <i>Drash Consultants, LLC</i>	Client's P.O. #: <i>116E1164</i>	Turnaround time: Standard(7) <input type="checkbox"/> (in working days)
Project Manager: <i>Paul Beckett</i>	Phone #: <i>210-340-5004</i>	
Address: <i>1045 Central Pkwy N., Ste. 103, San Antonio, TX</i>	Fax #:	RUSH: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3-5 <input checked="" type="checkbox"/> Days (additional charges)
Project Number: <i>116E1164</i>	Project Name: <i>Sterling-Commerce LSI</i>	TRRP 13 Report: Yes <input type="checkbox"/> No <input type="checkbox"/> (additional charges)
Project Location: <i>San Antonio, TX</i>	Sampler Signature:	Analysis for Permit Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		DMR Form Required: Yes <input type="checkbox"/> No <input type="checkbox"/>

Main Office: 10526 Gulfdale
San Antonio, Texas 78216
(210) 340-8121 • Fax (210) 340-8123

Branch: 2500 Montana Avenue
El Paso, Texas 79903
(915) 599-2182

www.alamoanalytical.com
admin@alamoanalytical.com

LAB ID# (Do not use)	Sampling		Composite	Grab	Matrix	FIELD ID#	FIELD DESCRIPTION	No. of Containers	ANALYSIS				REMARKS (Preservation, Size/Amount, Etc.)
	Date	Time							TPH	VOL (GAL)	ALCA'S	BTEX/MTBE	
161207701	12/16	1036	X	SO	B-1(6-8')		5	X	X	X			Rpt MTBE w/ VOC
-02		1120	X	SO	B-2(4-6')		5	X		X	X		
-03		1149	X	SO	B-2(8-10')		5	X	X	X			Rpt MTBE
-04		1431	X	SO	B-3(2.5-5')		5	X		X	X		
-05		1436	X	SO	B-3(7.5-10')		5	X	X	X			Rpt MTBE
-06		1500	X	SO	B-4(5-7.5')		5	X		X	X		
-07		1506	X	SO	B-4(12.5-15')		5	X	X	X			Rpt MTBE
-08		1523	X	SO	B-5(5-7.5')		5	X	X	X			Rpt MTBE
-09		1535	X	SO	B-5(12.5-15')		5	X		X	X		
-10		1603	X	SO	B-6(12.5-15')		5	X	X	X			Rpt MTBE

Relinquished by: (Signature / Print Name) <i>[Signature]</i>	Date <i>12/17/16</i>	Time <i>1000</i>	Received by: (Signature)
Relinquished by: (Signature / Print Name)	Date	Time	Received by: (Signature)
Relinquished by: (Signature / Print Name)	Date	Time	Received by: (Signature)
Relinquished by: (Signature / Print Name)	Date <i>12/17</i>	Time <i>1000</i>	Received by: (Signature) <i>[Signature]</i>

Headspace	<input type="checkbox"/>	If Yes, Amt. <u>N/A</u>
Properly Sealed	<input checked="" type="checkbox"/>	If No, Explain <u>0</u>
Chilled ≤4° C	<input checked="" type="checkbox"/>	If No, Temp. <u>3.1 C</u>

Comments:



ALAMO ANALYTICAL LABORATORIES, LTD.

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2500 Montana Avenue
El Paso, TX - 79903
Ph. (915) 599-2182

Sample Log-In Checklist

DATE: 12/17/2016 TIME: 10:10 INITIALS: [Signature]
CLIENT: [Signature] PROJECT: W.O# 1612077

1. Is a Chain of Custody present? Yes No
2. Is a Chain of Custody properly completed? Yes No
3. Are custody seals present? Yes No
If yes, are they intact? Yes No
 Are they on: Sample _____ or on Shipping Container _____
4. Are all samples tagged or labeled? Yes No
If yes, do the labels match the Chain of Custody? Yes No
5. Do all shipping documents agree (i.e., number of coolers arrived vs. on tickets)
If not, describe below. Yes No (N/A)
6. Are samples preserved properly? *If not, describe below.* Yes No
7. Are all samples within holding times on arrival?
If not, describe below. Yes No
8. Condition of shipping container: Intact or _____
9. Condition of samples: Intact or _____
10. Temperature of samples: Temp. (°C): 3.1 Corrected Temp. (°C): _____ Thermometer ID: DT1 or L2
11. pH strip lot#: _____ Samples out of pH range: _____
12. Delivery agent: Client UPS _____ Fed-Ex _____ Lone Star _____ Alamo P/U _____ Other _____
13. Sample disposal: Return to client _____ Alamo Analytical Disposal

Comments: (Reference checklist item number from above, or for comments on resolution below):

_____ [Signature]

Record of contacting client for resolution of sample discrepancies (first and retry contact)
Contacted How?

Name: _____ Phone _____ Fax _____ Date: ____/____/____ Time: _____
Name: _____ Phone _____ Fax _____ Date: ____/____/____ Time: _____